



U.S. Department of the Interior  
Office of Inspector General

# AUDIT REPORT

RECOVERY OF CONSTRUCTION COSTS,  
COLUMBIA BASIN PROJECT,  
BUREAU OF RECLAMATION

REPORT NO. 95-I-1204  
AUGUST 1995



# United States Department of the Interior

OFFICE OF INSPECTOR GENERAL  
Washington, D.C. 20210

**SEP 5 1995**

## MEMORANDUM

TO: **The Secretary**

FROM: **Wilma A. Lewis**  
**Inspector General**

SUBJECT SUMMARY: Final Audit Report for Your Information - "Recovery of Construction Costs, Columbia Basin Project, Bureau of Reclamation" (No. 95-I-1204)

Attached for your information is a copy of the subject final audit report.

We concluded that the value of the revenue flow to the U.S. Treasury could be increased if the Bureau of Reclamation updated the Columbia Basin Project cost allocation to reflect changes in the power and irrigation purposes. The Bureau agreed to prepare an interim cost allocation that reflects the Project as currently constructed, with the assumption that additional irrigation acreage will not be developed.

If you have any questions concerning this matter, please contact me at (202) 208-5745.

Attachment



# United States Department of the Interior

## OFFICE OF INSPECTOR GENERAL

Headquarters Audits  
1550 Wilson Boulevard  
Suite 401  
Arlington, VA 22209

**AUG 22 1995**

### Memorandum

To: Assistant Secretary - Water and Science

From: Marvin Pierce *Judy Harrison for*  
Acting Assistant Inspector General for Audits

Subject: Final Audit Report on the Recovery of Construction Costs, Columbia Basin Project, Bureau of Reclamation (No. 95-I-1204)

This report presents the results of our review of the recovery of construction costs on the Columbia Basin Project by the Bureau of Reclamation. The objective was to determine whether the Bureau's financial management practices on the Project, including construction cost allocation and recovery, complied with Reclamation law and Instructions and adequately protected the Government's interests.

We concluded that the value of the revenue flow to the U.S. Treasury could be increased if the Bureau updated the Project cost allocation to reflect changes in the power and irrigation purposes. In that regard, we recommended that the Bureau prepare an interim cost allocation for the Project which reflects the Project as currently constructed, with the assumption that additional irrigation acreage will not be developed. Upon completion, this allocation should be submitted to the Congress for approval before it is actually implemented.

The July 6, 1995, response (Appendix 2) from the Acting Commissioner, Bureau of Reclamation, concurred with our recommendation, and the response was sufficient for us to consider the recommendation resolved but not implemented. Accordingly, the recommendation will be referred to the Assistant Secretary - Policy, Management and Budget for tracking of implementation, and no further response to the Office of Inspector General is required (Appendix 3).

The legislation, as amended, creating the Office of Inspector General requires semiannual reporting to the Congress on all audit reports issued, action taken to implement audit recommendations, and identification of each significant recommendation on which corrective action has not been taken.

cc: Commissioner, Bureau of Reclamation

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# INTRODUCTION

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## BACKGROUND

The Columbia Basin Project, a multipurpose project located in the State of Washington, provides electrical energy to about 1.8 million people; delivers a full water supply to 530,000 acres of the approximately 1 million acres of agricultural land originally authorized to be developed; and provides for other purposes, such as flood control, fish and wildlife, and navigation. The Congress authorized the Bureau of Reclamation to construct the Columbia Basin Project in 1943 and in 1966 authorized construction of a third power plant, which was completed in 1980 at the Project's Grand Coulee Dam complex. The Bureau also installed six pump generators in the late 1970s and early 1980s to assist in meeting increased power demands and to provide irrigation pumping capacity for the 470,000 acres of land remaining to be developed.

The construction costs for power and irrigation are repaid to the U.S. Treasury by the beneficiaries of those Project purposes, while the costs of other Project purposes, such as flood control and fish and wildlife, are borne by the general taxpayers. The amount of repayment to the U.S. Treasury is determined by an allocation of the construction costs to the various purposes based on the relative benefits to be received from each purpose. The first allocation was done in the 1940s and updated with an interim cost allocation in 1963. Of the \$880 million in Project construction costs incurred as of fiscal year 1993 and allocated based on the 1963 cost allocation, the Bureau allocated \$196 million to power; \$602 million to irrigation; \$57 million to flood control; and \$25 million to navigation, recreation, Indian reservation, fish and wildlife, and other miscellaneous purposes. The Bureau directly assigned the \$842 million in costs related to the construction of the third power plant and installation of the pump generators to power (\$795 million) and irrigation (\$47 million). The completion of the Project's remaining agricultural component, totaling about 470,000 acres, would add another \$2.9 billion in estimated construction costs to the Project.

The Project construction costs allocated to power are repaid by the users with interest, while the costs allocated to irrigation are repaid by the irrigators or the power users without interest over a 50-year period. The power users are responsible for the repayment of irrigation construction costs determined by the Bureau to be beyond the ability of the irrigators to pay. This "irrigation assistance" occurs after repayment of power construction costs. The Project costs for the other purposes are

either nonreimbursable, in accordance with Federal law, or deferred for future cost recovery, in accordance with the Leavitt Act.<sup>1</sup>

## **OBJECTIVE AND SCOPE**

The audit objective was to determine whether the Bureau's financial management practices on the Project, including construction cost allocation and recovery, complied with Reclamation law<sup>2</sup> and Instructions and adequately protected the Government's interests. Our review was conducted at the Bureau's Pacific Northwest Region, located in Boise, Idaho, and the Columbia Basin Project Office, located in Ephrata, Washington. This report and another report<sup>3</sup> on the billing and collection of Project operation and maintenance costs present the results of our review of financial management of the Columbia Basin Project.

To accomplish our objective, we reviewed Project planning documents and financial records and interviewed Regional officials responsible for the operation and financial management of the Project, including cost recovery. The scope of the audit included an evaluation of the 1963 interim cost allocation and subsequent changes in the Columbia Basin Project's role in providing power and water to areas of the Pacific Northwest, which affected the allocation of costs.

Our review was made in accordance with the "Government Auditing Standards," issued by the Comptroller General of the United States. Accordingly, we included such tests of records and other auditing procedures that were considered necessary under the circumstances. Further, we reviewed the Secretary of the Interior's fiscal year 1993 Annual Statement and Report, required by the Federal Managers' Financial Integrity Act of 1982, to determine whether the Bureau had identified any weaknesses in the allocation of construction costs. The Report did not disclose any material weaknesses in this area. However, we found a weakness in the Bureau's allocation procedures during our review of the Columbia Basin Project. Our recommendation, if implemented, should strengthen internal controls over the allocation of construction costs on this Project and increase the Federal Government's cost recovery.

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<sup>1</sup>The Leavitt Act provides that the collection of all construction costs allocated against any Indian-owned land within any Government irrigation project is deferred as long as the title to the lands remains in Indian ownership (25 U.S.C. 386a).

<sup>2</sup>Reclamation law is a term used to refer to the total body of public laws governing the reclamation program, beginning with the Reclamation Act of 1902 and including all laws amending and supplementing the Act.

<sup>3</sup>Draft report entitled "Recovery of Operation and Maintenance Costs, Columbia Basin Project," Bureau of Reclamation" (Assignment No. W-IN-BOR-O02-94), issued in May 1995.

## **PRIOR AUDIT COVERAGE**

Neither the Office of Inspector General nor the General Accounting Office has issued any reports on the Bureau's financial management of the Columbia Basin Project during the last 5 years. However, the Office of Inspector General has issued reports on the Bureau's Dolores and Animas-La Plata Projects, the Pick-Sloan Missouri Basin Program, and the Central Arizona Project. These reports found deficiencies in the Bureau's cost allocation procedures that significantly reduced Federal cost recovery as follows:

- "Development Status of the Dolores and the Animas-La Plata Projects, Bureau of Reclamation" (No. 94-I-884), issued in July 1994, concluded that the irrigation benefits of both projects were overstated because indirect benefits were included in the projects' cost allocations and that the capacity of the irrigators to pay their contractual share of the operation and maintenance costs assigned to irrigation had diminished. Thus, both projects could be financially infeasible. We recommended that the Bureau address these concerns by: (1) revising the cost allocation and repayment arrangements of the Dolores Project to protect the Government's financial interests; (2) reevaluating the feasibility of developing the non-Indian portion of the irrigation component of the Animas-La Plata Project and (3) seeking Congressional approval, if needed, to reformulate the Animas-La Plata Project. The Bureau generally concurred with our recommendations, which we considered resolved.

- "Pick-Sloan Missouri Basin Program Cost Allocation, Bureau of Reclamation" (No. 93-1-1641), issued in September 1993, concluded that the allocation of Program costs based on the "ultimate development concept" had not protected the Government's investment in the Program. The allocation of costs did not reflect the benefits received by Program beneficiaries. Consequently, Program power users benefited at the expense of the general taxpayers. We recommended that the Bureau seek Congressional approval and funding for a complete reallocation of Program costs and modify the allocation of pumping power, storage, and operation and maintenance costs to initiate increased cost recovery as soon as possible. The Bureau, in its response to the report, indicated general concurrence with the intent of the recommendations.

- "Cost Allocation and Repayment Central Arizona Project, Bureau of Reclamation" (No. 92-I-1151), issued in August 1992, concluded that continued inclusion of indirect irrigation benefits in the cost allocation of the Project substantially overstated the benefits to be derived from the irrigation function, which understated reimbursable cost recovery. We recommended that the Bureau revise the cost allocation to limit irrigation benefits to those directly associated with that purpose. The Bureau did not agree to remove indirect irrigation benefits from the cost allocation and repayment computations because of, it said, "historical precedent." As such, the issue remains unresolved pending a current reallocation of costs and the settlement of present repayment contract concerns.

## **FINDING AND RECOMMENDATION**

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### **ALLOCATION OF PROJECT COSTS**

The Columbia Basin Project's 1963 cost allocation methodology has not been updated to reflect construction of a third power plant and installation of pump generators at Grand Coulee Dam or cessation of planned irrigation development. Reclamation law and Instructions and legislative history all require that costs be allocated among Project purposes based on the benefits received by beneficiaries. In addition, the Bureau of Reclamation prepared a Definite Plan Report before the third power plant was constructed, which stated that when the power plant was completed, a revised cost allocation fully integrating the third power plant's construction with the rest of the Project would be prepared. However, according to Pacific Northwest Regional officials, the interim 1963 cost allocation has not been updated for changes in the power and irrigation purposes because the Project has not been completed and the Congress has not reauthorized the unconstructed portion of the Project. We estimated that the 1963 cost allocation overstated the construction costs attributable to both irrigation and flood control by \$89.7 million as of fiscal year 1993. As such, the power costs were understated, resulting in a present value<sup>4</sup> loss to the U.S. Treasury of \$48.7 million as of fiscal year 1993.

### **Changing Use**

When the Project was originally constructed in the 1930s and 1940s, the planned purposes were the generation of power and the delivery of irrigation water to approximately 1 million acres of land. Since initial development benefits accruing from the Project have shifted as changes in Project facilities and operation have occurred. For example, the Bureau realized after a flood in 1948 that the Grand Coulee Dam could be operated to provide additional flood control protection. Accordingly, the Bureau changed the operating procedures employed at the Dam to provide these flood control benefits. In addition, changes in anticipated energy demand and additional Columbia River development led to the construction of additional power generation facilities at the Project. The addition of the third power plant and pump generators almost tripled power generation capacity, increasing the Project's initial 2.3 million kilowatts<sup>5</sup> of capacity to 6.5 million kilowatts.

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<sup>4</sup> A financial term referring to the time value of money, which recognizes that interest on money makes \$1 earned in the future worth less than \$1 earned today. For example, assuming an interest rate of 8 percent, \$1 due in 10 years is worth only \$.46 today.

<sup>5</sup> A kilowatt is the electrical unit of power equal to 1,000 watts, or about 1.34 horsepower.



Further, Project irrigation development has changed from that originally anticipated. Historical planning documents indicated that development of the Project's full 1 million-acre potential was to proceed "as economic conditions may justify," with completion of the Project anticipated in the early 1970s. However, the pace of development slowed in the late 1960s and reached a plateau in the 1970s of about 530,000 acres because the Congress, the State, and other parties involved did not view the construction of additional irrigation facilities as economically and financially viable or ecologically sound.

## **Allocation Requirements and Current Practices**

In developing the Project, planning documents and Reclamation Instructions provided the Bureau with guidance to allocate costs to the purposes served by the Project and to recover costs from Project beneficiaries. However, these documents and Instructions require that costs be reallocated when significant changes in accomplishments, benefits, or costs occur. In addition, the Project's legislative history requires that Project costs be allocated among the various purposes based on the benefits obtained.

In conformance with these requirements, the Bureau allocated the Project costs in the 1940s to the various purposes served and reallocated costs in the 1960s to recognize the added flood control benefits. Both of these allocations assumed that the 1 million acres of planned agricultural development would occur. However, in the 1980s, the Bureau did not reallocate the costs of the Project to reflect the addition of the third power plant and pump generators or the cessation of irrigation development in the Project. Instead, the Bureau directly assigned the additional Project construction costs to purposes that did not reflect the Project's current uses. This occurred, even though the Bureau, in its Definite Plan Report for the construction of the third power plant indicated that this facility would be integrated with the original structure and that Project costs would be reallocated after the addition was completed.

Regional officials informed us that they had not revised the cost allocation because the Project would require a final cost allocation upon completion and the acreage to be developed for Project irrigation has not been reduced by the Congress. In our opinion, however, Congressional action to reduce the scope of the irrigation function is not required to permit a reallocation of Project costs, although Congressional approval of a reallocation is necessary. In 1977, the Congress passed the Department of Energy Organization Act, which included a prohibition on the reallocation of costs of multipurpose facilities without Congressional approval. We believe that the Bureau should seek such approval because, by not reallocating Project costs based on current use to reflect the partial irrigation development and the addition of the third power plant, the Bureau has reduced cost recovery to the U.S. Treasury. We found, in recalculating the 1963 Project cost allocation based on

these changes, that the construction costs assigned to the irrigation and flood control purposes of the Project were collectively reduced and that the costs assigned to power increased by \$89.7 million. In our opinion, a reallocation of Project construction costs reflecting current use and benefits should be performed. Such a reallocation should be considered “interim,” as was the 1963 version.

We estimated that the \$89.7 million increase to power and the corresponding decrease to irrigation and flood control would result in a \$48.7 million present value increase in cost recovery to the U.S. Treasury. In determining our estimate of the net present value of the changes to the cost allocation, we used a 6 percent interest rate and assumed that: (1) the power function cost increase would be amortized and repaid over a 50-year period at the Project interest rate of 3 percent (2) the irrigation function cost decrease was a reduction of the irrigation assistance from power which would have been repaid at or near the end of the repayment period; and (3) the flood control cost function decrease was a reduction of a nonreimbursable cost.

## **Recommendation**

We recommend that the Commissioner, Bureau of Reclamation, ensure that the Pacific Northwest Region prepares an interim cost allocation for the Columbia Basin Project that reflects the Project as currently constructed and assumes that additional irrigation acreage will not be developed. Upon completion, this reallocation should be submitted to the Congress for approval before it is actually implemented.

## **Bureau of Reclamation Response**

The July 6, 1995, response (Appendix 2) from the Acting Commissioner concurred with the recommendation, stating that the Bureau “will revise the interim cost allocation which reflects the Columbia Basin Project as currently constructed and will assume that additional irrigation acreage will not be developed.” The response further stated that the bureau will follow “the appropriate review and approval process” before it implements the interim cost allocation.

## **Office of Inspector General Comments**

The Bureau’s response was sufficient for us to consider the recommendation resolved but not implemented. Accordingly, the recommendation will be referred to the Assistant Secretary for Policy, Management and Budget for tracking of implementation (Appendix 3).

## CLASSIFICATION OF MONETARY AMOUNTS

<u>Finding Area</u>	<u>Funds To Be Put To Better Use</u>
Project Cost Reallocation	\$48.7 million*

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\* In performing our recalculation of the Columbia Basin Project cost allocation, we:

- Adjusted estimated costs of the irrigation function to reflect its current size and scope.
- Adjusted estimated costs of the power function to reflect the additions of the third power plant and the pump generators. All the construction costs associated with the pump generators were assigned to the power function. The installation of the pump generators was considered 100 percent related to power production, since the present irrigated acreage of the Project can be completely served by the original six pumps and the pump generators are currently used primarily to shift pumping to low power demand periods (increasing “peak” power generation revenues). As such, the current primary purpose of these pumps is to facilitate the marketing and the sale of Project power for maximum revenue.
- Reallocated the multipurpose costs of the Project based on the revised costs determined for the irrigation and power functions.



# United States Department of the Interior

BUREAU OF RECLAMATION  
WASHINGTON, D.C. 20240

JUL 06 1995

IN REPLY  
REFER TO:

D-501O  
ADM-8.00

## MEMORANDUM

To: Office of Inspector General  
Attention Assistant Inspector General for Audits

From: Daniel P. Beard  
Acting for Commissioner

Subject: Draft Audit Report on Recovery of Construction Costs, Columbia Basin Project Bureau of Reclamation (No. W-IN-BOR-002-94A)

The Bureau of Reclamation (Reclamation) offers the following comments in response to the recommendation in the subject report:

### Recommendation 1

We recommend that the Commissioner, Bureau of Reclamation, ensure that the Pacific Northwest Region prepares an interim cost allocation for the Columbia Basin Project that reflects the Project as currently constructed and assumes that additional irrigation acreage will not be developed. Upon completion this reallocation should be submitted to the Congress for approval before it is actually implemented.

### Response

Concur. Reclamation will revise the interim cost allocation which reflects the Columbia Basin Project as currently constructed and will assume that additional irrigation acreage will not be developed. The appropriate review and approval process will be followed prior to implementing the interim cost allocation.

The responsible official is the Director, Pacific Northwest Region. The target date for developing an interim cost allocation is March 31, 1997.

If you have any questions or require additional information, please contact Luis Maez at (303) 236-3289, extension 245.

cc: Assistant Secretary - Water and Science, Attention Margaret Carpenter  
Office of Financial Management Attention: Wayne Howard

## STATUS OF AUDIT REPORT RECOMMENDATION

<u>Finding/ Recommendation Reference</u>	<u>Status</u>	<u>Action Required</u>
1	Resolved; not implemented.	No further response to the Office of Inspector General is required. The recommendation will be referred to the Assistant Secretary for Policy, Management and Budget for tracking of Implementation.

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